

22. (Unamended From Previous Version) An ink absorbent according to
Claim 8, wherein said supply port is adapted to receive an ink supply portion of an ink jet
head into an inside of said housing.

Please add Claims 23 and 24, as follows:

see fig 10
~~23. (New) An ink absorbent according to Claim 2, wherein said non-
thermally processed face is arranged by cutting a thermally processed face and has a
hardness softer than the thermally processed face.~~

~~24. (New) An ink absorbent according to Claim 21, wherein said non-
thermally processed face is arranged by cutting a thermally processed face and has a
hardness softer than the thermally processed face~~

REMARKS

This application has been carefully reviewed in light of the Office Action
dated July 24, 2002 (Paper No. 15). Claims 2, 5 to 8, 10 and 19 to 24 are in the
application, of which Claims 2, 5, 8 and 21 are independent. Reconsideration and further
examination are respectfully requested.

Applicants thank the Examiner for his indication of allowable subject matter, and in particular for his indication that Claims 5 to 7 and 10/5 have been allowed^{1/}. Since Claims 19 and 20 depend indirectly from Claim 5, it is believed that the Examiner intended to give an indication of allowability for those claims as well. In this regard, the rejection of Claims 19 and 20 under § 103(a) has been treated as if it had been entered unintentionally.

Applicants also thank the Examiner for his indication of allowability for the subject matter of Claim 9. In keeping with this indication, Claim 9 has been cancelled and the substance thereof incorporated into independent Claim 8. It is therefore believed that Claims 8, 10/8 and 22 are also in condition for allowance.

Claim 21 was rejected under 35 U.S.C. § 112, second paragraph. In response, the word “comprising” has been inserted into this claim. Withdrawal of the rejection is respectfully requested.

Claims 2, 8, 10/(2,8) and 22 were rejected under 35 U.S.C. § 102(b) over European 756,935 (Ono); and Claims 10/(2,8) and 21 were rejected under § 103(a) over U.S. Patent 5,509,140 (Koitabashi). The rejection of Claims 8, 10/8 and 22 has been addressed above. As for the remaining Claims 2, 10/2 and 21, reconsideration and withdrawal of the rejections are respectfully requested, for at least the following reasons.

^{1/}Actually, it was said that Claims “10/(5-7)” were allowed. However, since Claim 10 does not multiply depend from Claims 6 and 7, but rather only from Claim 5 (as well as Claims 2 and 8, which had been rejected), it is believed that the Examiner intended to indicate that Claim 10/5 had been allowed.

The present invention concerns an ink absorber having surfaces formed by thermal processing, such as thermoforming. Although such ink absorbents are widely used, particularly in circumstances where an ink tank has a complex interior shape, it has been found that the surfaces of the ink absorbent become less resilient due to thermal processing, and the ink absorbent consequently tends to correspond less to the interior surface of the ink tank. This lack of correspondence tends to be undesirable, since it might promote the existence of an ink flow path communicated directly with air which, in turn, might adversely affect ink supply performance.

The invention addresses the foregoing situation and employs an arrangement in that a thermally formed ink absorbent has a cut face that is a non-thermally processed face. In the context of rejected Claims 2 and 21, this non-thermally processed cut face is positioned in correspondence to a supply port of the ink tank.

In contrast to the foregoing arrangement, Ono discloses a cut fibrous absorbent which is inserted into a mold, such that the entire fibrous absorbent is thermally processed into an outer shape corresponding to an inner shape of an ink tank. As clearly illustrated in Figure 2 of Ono, the entire cut fibrous mass is contained in a mold as shown in Figure 3, and the entirety thereof is heated so that a whole of the outer surface of the fibrous mass becomes a thermally-processed face.

Thus, Ono merely discloses a known fibrous absorbent in which the entirety of its outer surface is thermally processed. Ono is not seen by Applicants to disclose an ink absorbent in which one face is a non-thermally processed cut face, much less that such a face is arranged in correspondence to a supply port of an ink tank.

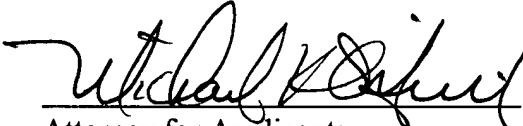
Koitabashi shows an ink tank in which an ink chamber and an absorbent chamber are provided. As correctly observed in the Office Action, Koitabashi does not show a thermoformed ink absorbent having a cut face. As a consequence, Koitabashi can give no guidance to those of ordinary skill in the art as to the provision of a non-thermally processed cut face, much less the arrangement of such a face in correspondence to the supply port of an ink tank.

It is therefore respectfully submitted that Claims 2 and 21 recite subject matter that is neither anticipated nor would have been obvious to one of ordinary skill in the art. Allowance of these claims is respectfully requested.

No other matters being raised, it is believed that the entire application is fully in condition for allowance, and such action is courteously solicited.

Applicants' undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

2. (Three Times Amended) An ink absorbent contained in a housing of an ink tank for storing ink in the interior thereof and provided with a supply port for leading out ink to the outside, and an atmospheric communication port for communication with the air outside, said supply port being adapted to receive an ink supply portion of an ink jet head into an inside of said housing,

wherein said ink absorbent [being formed] is arranged by [fiber] a fibrous material having [a] an outer surface thereof thermally processed into an outer shape configured for containment in the interior of said ink tank, and [formed at least by thermoforming,

wherein a side [the] face of said ink absorbent facing said supply port [on the inner face] of said ink tank is a non-thermally processed cut face.

8. (Three Times Amended) An ink absorbent contained in a housing of an ink tank for storing ink in the interior thereof and provided with a supply port for leading out ink to the outside, and an atmospheric communication port for communication with the air outside, said ink absorbent being formed by fiber material having a surface formed at least by thermoforming, wherein

two faces of said ink absorbent opposite to each other are cut faces parallel to each other in fiber direction.

9. (Cancelled).

21. (Amended) An ink tank [provided with] comprising a supply port for leading out ink to the outside, an atmospheric communication port for communication with the air outside, a negative pressure generating member installation chamber in which an ink absorbent is contained, a liquid storage chamber communicated with said negative pressure generating member installation chamber through a communication passage to store ink to be supplied to said negative pressure generating member installation chamber, said liquid storage chamber having substantially closed with the exception of said communication passage, and a partition wall member defining said communication passage and partitioning said negative pressure generating member installation chamber and said liquid storage chamber, said supply port being adapted to receive an ink supply portion of an ink jet head into an inside of said negative pressure generating member installation chamber,

wherein said [the face of said ink absorbent facing said supply port is a cut face, the] ink absorbent [being formed] is arranged by [fiber] a fibrous material, an outer [having the] surface thereof is thermally processed into an outer shape configured for containment in the interior of said ink tank, and wherein said ink absorbent is [formed by thermoforming and being contained in a manner that a side face of said ink absorbent corresponding to said supply port of said ink tank is a non-thermally processed cut face [said negative pressure generating member installation chamber].